

What's Bugging You? – Spread of a Disease Laboratory Activity

The way in which a disease spreads through a population demands the careful collection and analysis of data. When an outbreak of a serious disease occurs, scientists must track down the disease and determine its origin. In this investigation, you will simulate the spread of an infectious disease and determine the original carrier of the disease.



Problem:

Problem

How can you simulate the spread of disease within a community?

Materials:

One cup filled with stock solution

One pipette

Procedure:

1. Select one plastic cup with a stock solution provided by your teacher. Record your name in Data Table 1 on the next page.
2. Obtain a pipette from your teacher.
3. At your teacher's signal, begin walking around among your classmates until the teacher tells you to stop. Using the pipette, exchange a pipette full of your solution from your plastic cup into the plastic cup of the contact. You should also receive a pipette full of the solution from your contact's plastic cup. Record the name of that person as Contact 1 in the Data Table 1.

DATA TABLE 1:

DATA TABLE 1:	CONTACT 1	CONTACT 2	CONTACT 3
YOUR NAME			

4. Repeat step 3 and record the name of this person as Contact 2.
5. Repeat step 3 and record the name of this person as Contact 3.
6. Your teacher will now add several drops of an indicator to your cup to determine whether or not you have been infected or not.
7. After performing the indicator test for the presence of infections for all students in the class, your teacher will record the names and contacts of the infected individuals. You can use Data Table 2 to record this information.

DATA TABLE 2:

[illegible]

3. In the space provided on this sheet, make a diagram of the transmission route.

4. Suppose you came into contact with as many people as possible during a specified period of time. What effect would this have on the outcome of this simulation?